

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A filter delivery catheter, comprising:
an elongated shaft defining a shaft lumen, the shaft having a proximal end and a distal end;
the elongated shaft including a plurality of aspiration ports;
the plurality of aspiration ports located circumferentially on the elongated shaft at one or more longitudinal positions proximal of the distal end; and
a blood permeable filtration device for trapping debris within the lumen of a blood vessel, the filtration device having a proximally-facing mouth, an expanded configuration, and a collapsed configuration, the filtration device in its collapsed configuration being sized to fit within the shaft lumen;
wherein ~~at least one of the plurality~~ all of aspiration ports ~~[[is]]~~ are located proximally of the filtration device when the filtration device is entirely contained within the shaft lumen;
wherein the distal end of the elongated shaft further comprises an operable end cap fixedly attached thereto.
2. (Cancelled)
3. (Previously Presented) The filter delivery catheter of claim 1, wherein the filtration device is enclosed within the elongated shaft proximal of the operable end cap and proximate the distal end of the elongated shaft.
4. (Previously Presented) The filter delivery catheter of claim 1, wherein the plurality of aspiration ports are located on the elongated shaft proximate the distal end of the elongated shaft and proximal of the filtration device.

5. (Cancelled)

6. (Previously Presented) The filter delivery catheter of claim 4, wherein the plurality of aspiration ports are located longitudinally on the elongated shaft.

7. (Previously Presented) The filter delivery catheter of claim 1, wherein the lumen of the elongated shaft fluidly couples the plurality of aspiration ports to the proximal end of the elongated shaft.

8. (Previously Presented) The filter delivery catheter of claim 1, wherein the proximal end of the elongated shaft is in fluid communication with a suction providing means for extracting debris from the lumen of the blood vessel through the plurality of aspiration ports.

9. (Original) The filter delivery catheter of claim 1, wherein the filtration device is located within the elongated shaft proximate the distal end of the elongated shaft.

10. (Previously Presented) The filter delivery catheter of claim 1, wherein the plurality of aspiration ports are located proximate the distal end of the elongated shaft.

11. (Cancelled)

12. (Original) The filter delivery catheter of claim 1, wherein the filtration device is a floating filter.

13. (Original) The filter delivery catheter of claim 1, wherein the filtration device is fixedly attached to a wire.

14. (Previously Presented) The filter delivery catheter of claim 1, wherein the debris includes one or more of emboli, thrombi, and dislodged tissue.

15. (Withdrawn) A method for extracting debris from the vasculature while delivering a blood permeable filtration device distal of a lesion, said method comprising the steps of:

providing a guide wire with a distal end and a proximal end, and placing the guide wire within the lumen of a blood vessel with said distal end positioned distal of the target site such as a stenosis or a lesion;

providing a filter delivery catheter comprising an elongated shaft having a distal end and a proximal end, the filter delivery catheter further comprising a blood permeable filtration device enclosed within the elongated shaft and proximate the distal end of said shaft, the filter delivery catheter further comprising one or more aspiration ports in a distal region proximate the distal end of the elongated shaft, said aspiration ports in fluid communication with a suction providing means fluidly connected to said proximal end of said elongated shaft;

holding the guide wire stationary and advancing the filter delivery catheter over the guide wire towards the target site, such as a stenosis or a lesion, inducing suction at the proximal end of the elongated shaft while the distal end and the distal region of the elongated shaft comprising the one or more aspiration ports traverse past the target site thereby extracting debris from the lumen of the blood vessel; and

subsequent to the inducing suction step, deploying said filtration device distal of the target site, such as a stenosis or a lesion, in the lumen of the blood vessel by holding the guide wire stationary while extracting the filter delivery catheter from the lumen of the blood vessel.

16-22. (Cancelled)

23. (Currently Amended) A filter delivery catheter, comprising:
an elongated shaft defining a shaft lumen, the shaft having a proximal end and a distal end;

the elongated shaft including a plurality of aspiration ports;
the plurality of aspiration ports located circumferentially on the elongated shaft at one or more longitudinal positions proximal of the distal end;
a blood permeable filtration device for trapping debris within the lumen of a blood vessel, the filtration device having a proximally-facing mouth, an expanded configuration, and a collapsed configuration, the filtration device in its collapsed configuration being sized to fit within the shaft lumen; and
a guidewire slidably disposed within the shaft lumen;
wherein all of the aspiration ports are located proximally of the filtration device when the filtration device is entirely contained within the shaft lumen;
wherein the guidewire passes through the proximal most aspiration port.

24-25. (Cancelled)

26. (Previously Presented) The filter delivery catheter of claim 1, further comprising a guidewire passing through the proximal most aspiration port.

27. (Previously Presented) The filter delivery catheter of claim 1, wherein the end cap includes a plurality of interleaving plates.

28. (Previously Presented) The filter delivery catheter of claim 27, wherein the plurality of interleaving plates form a cone shape.

29. (Previously Presented) The filter delivery catheter of claim 27, wherein the plurality of interleaving plates form a dome shape.